

LLEW JONES EXAMINES MYTHS SURROUNDING WIND ENERGY

By LeAnne Kavanagh

State Senator Llew Jones of Conrad says there are far too many myths floating around when it comes to wind energy and those myths, if not dispelled, may delay, if not destroy the development of wind energy in the Golden Triangle area and the construction of the Montana-Alberta transmission line.

According to Jones, "In Montana we have two, and a possible third transmission line being pursued, but so far the resistance to the lines has served to significantly delay progress. If our area does not rise to the challenge of getting the MATL line done soon, then the opportunity to participate in a lucrative and long-lasting power market will be lost," believes Jones.

"Other states and areas have recognized this and, as the proposed transmission map shows, are rising to the challenge," he noted.

"It is time for our area to find solutions to our issues and get this line done," stated Jones. "A huge portion of our area's future potential development is at stake."

Jones contends if "our area can deal with its transmission bottlenecks, in particular, if we can address the factors that have stalled the MATL line, then North Central Montana can play an integral part in furnishing this wind supply. Over time, we could see \$2 billion worth of development from the Canadian border to Great Falls."

The MATL environmental impact study (EIS) hearing will be scheduled soon. "Please make the time to show up and have your input heard so that we can settle this matter," urged Jones, who has compiled some factual information to refute the most popular myths surrounding wind energy.

Over the coming weeks, Jones will share that information with our readers. The first of those factual articles about wind energy dispelling commonly believed myths appears below.

Wind Myth:

The variable nature of the wind makes it an inappropriate fuel source for electrical generation.

There is no doubt that wind is variable, in fact, it is estimated that windmills in our area will only be generating at a 35-40 percent capacity level. This translates into the fact that a 100MW wind farm (enough power for 100,000 homes) will generate 35-40 MW on average.

Because of its variable nature, wind is not a good resource for base load power. Base load power primary sources include hydro, coal, nuclear, oil, or natural gas. However, wind can quite easily be paired with other resources.

For instance, wind, when paired with natural gas, results in a 100 percent generation capacity at a lower total cost (while natural gas is variable, wind is often cheaper now), far less emission (when the wind blows and you turn the gas off the emissions are zero), and a reduced dependence on foreign imports.

Wind, when paired with hydro, significantly reduces the amount of water that has to be run downstream continuously. This allows the hydro system to release water at times better suited for meeting periods of peak energy demand, makes water available for fish and environmental concerns, and preserves water for irrigation and recreation opportunities.

In addition, locating wind farms across geographically diverse areas significantly reduces variability. In fact, recent studies that analyzed power portfolios, including wind generation combinations from farms in the Columbia Basin and Montana, had significantly reduced variability. In fact, a lot of the recent interest in Montana wind has been driven by the search for geographic diverse wind farm locations.

The reality is:

Our area has a wind capacity factor in the 35-40 percent range. The wind can help meet the power loads 35-40 percent of the time with zero emissions, thus conserving our precious water or fossil fuels for peak loads periods while reducing our dependence on foreign fossil fuels.

Wind Myth:

Wind energy is extremely

expensive and thus not competitive with other electric sources.

To set the stage for this discussion, I pulled my October electric bill from NorthWestern Energy. I used 960 Kilowatt hours (KWh) at a total cost of \$94.71, which equates to 9.86 cents per KWh. This price does include transmission, delivery, and service charges, thus the actual electricity cost to the consumer is in the 5 to 6 cent per KWh range.

The logical Montana wind farm example to review as a pricing example is Invenergy's 135,000 Kilowatt Judith Gap Wind Farm. Invenergy signed a long-term power purchase agreement with NorthWestern, which currently has wind-generated electricity being supplied for approx 3.3 cents per KWh.

As the wind is variable and has to be stabilized, an additional .5 to 1 cent per KWh will be required for regulation/stabilizing energy (estimate based upon data provided to the 2007 Legislature and confirmed by the Northwest Wind Integration Action Plan).

NorthWestern's current cost for wind energy from Judith Gap is estimated to be in the mid 4 cent per KWh range.

If you add all the federal tax incentives in as well, the total cost of renewable, carbon-free energy from Judith Gap is in the 6 cent per KWH range.

So how does this new wind plant compare to other new power plants? The proposed new coal plant near Great Falls, the Highwood Generating Station, according to their EIS is forecasted to have energy costs of 6.62 cents per KWh.

The Basic Electric Natural Gas station built in 2006 near Butte is currently selling electricity for 10.3 cents per KWh to NorthWestern.

Recent volatility in natural gas prices tends to have all the gas plants in the 7 to 15 cent range, depending on gas price. New hydroelectric facilities (dams) are almost impossible to permit in today's environment, in fact Bonneville Power is having to bypass water for fish flows and has requests to breach dams in its system, so relevant data on new projects of any size is hard to find.

In fact, expansion of our hydroelectric base is not considered a viable option for increased electricity.

The reality is . . .

Wind generation equipment such as was installed 20-30 years ago was not price competitive with other generation sources.

However, today's large capacity technologically advanced mills are very cost competitive for electric generation when compared against other new plants even when stabilizing costs and federal incentives are included.

In addition, the cost of wind generation electricity is forecasted to remain quite stable due to the fact that the fuel is free and renewable, plus it has virtually no detrimental environmental footprint.

Price stability is certainly not something that can be associated with the cost for fossil fuel based energy over the last few years. Wind certainly can't stand alone due to its variable nature, but, when paired with other resources, can provide 15-20 percent of the electricity on our grids in a very clean, safe, and affordable manner.

What's even better is that we have a lot of wind in our area to farm.